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Yet another acronym - Technology-enhanced Academic Language Support (TALS)

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Introduction

The 2006 Birrell Report—the more readily recognised appellation of the *Evaluation of the General Skilled Migration Categories* (Birrell, Hawthorne & Richardson 2006)—has had an extensive, sustained and substantial impact on tertiary education in Australia. Its findings led directly to the *Review of Australian Higher Education* (the Bradley Review), which recommended that higher education institutes needed to place "a greater focus on English language proficiency" (Bradley, Noonan, Nugent & Scales 2008, p. 103), and the commissioning of the Good Practice Principles for English Language Proficiency of International Students in Australian Universities (GPP) by the Department of Education, Employment and Workplace Relations (DEEWR). Australian universities have since devoted significant amounts of time, labour and money towards academic language and learning (ALL) enhancement and support. The Association of Academic Language and Learning (2019) currently lists 38 of Australia's 43 universities on its database as offering some form of ALL support, the most popular being one-to-one consultations with students. The 2013 International Education Association of Australia (IEAA) symposium steering committee called this increased awareness of the role of English language in learning outcomes and student success a "paradigmatic shift" that has resulted in the mainstreaming of in-degree, language development programs in the Australian tertiary sector (International Education Association of Australia 2013, p. 8).

Academic language and learning (ALL) in the Australian context

That ALL provisioning at universities has taken a variety of forms and approaches is well-trodden territory in the literature and needs to only be briefly covered here (Dunworth 2013; Fenton-Smith et al. 2016; Jones, Bonanno & Scouller 2001; Murray & Nallaya 2014; Wingate 2006). Jones et al. (2001, p. 11) mapped these various approaches along a descriptive continuum with four distinct positions that define programs according to the degree of their contextualisation within disciplinary content and discourse (Figure 1).

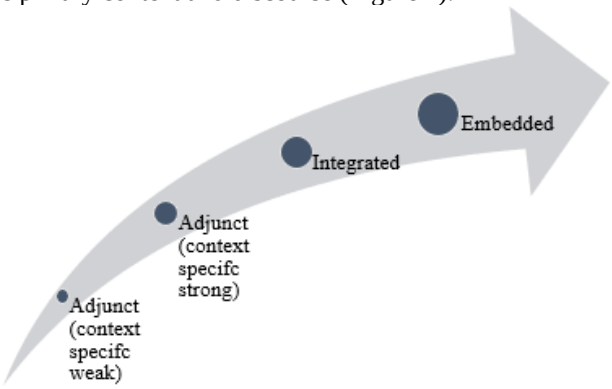

Figure 1. Jones, Bonanno & Scoulle's continuum of tertiary ALL support

On one end of this continuum are the 'adjunct-weak' and 'adjunct-strong' programs. Programs of these types are situated externally to students' regular coursework and have little to no integration with courses in the university. 'Weak' programs, like the Griffith University EnglishHELP Yourself Resources (Humphreys, Smith & Ning 2016), are more generic in nature and less focussed on disciplinary details, and are thus intended to be relevant across a range of contexts, while 'strong' programs, such as the University of Melbourne's AIRport program (2016), utilise

discipline-specific and/or some course-specific materials (Goodfellow, Puxley & Strauss 2009; Wingate & Dreiss 2009). Next along the continuum are integrated programs, such as the Write Reports in Science and Engineering (WRiSE) program at the University of Sydney (Drury & Jones 2010) and the Postgraduate English Language Enhancement (PELE) tutorials at Griffith University (Fenton-Smith & Humphreys 2016). Integrated programs utilise contextualised and course-specific ALL materials that are taught in tandem with the discipline curricula or syllabus, and there is generally a greater degree of collaboration between the ALL practitioners and the disciplinary academics. Finally, embedded programs, generally considered to be best practice (Barrett-Lennard, Dunworth & Harris 2011; Jones et al. 2001; Mort & Drury 2012; Murray & Nallaya 2014; Wingate 2006; Wingate & Dreiss 2009; Maldoni & Lear 2016; Baik & Greig 2009; Briguglio & Watson 2014), involve the embedding of specifically contextualised ALL materials within the curriculum of a university course. In the ideal embedded program, the disciplinary academic provides both course content and academic literacy guidance. Maldoni and Lear (2016) have also detailed embedded approaches where a variety of collaborative strategies between academics and ALL staff may be adopted.

Despite the strong advocacy in the literature for embedding, and criticism of more generic approaches (Mort & Drury 2012; Wingate & Dreiss 2009), programs across the full range of the continuum have been proven to show promise (Arkoudis, Baik & Richardson 2012; Baik & Greig 2009; Briguglio & Watson 2014; Chanock 2004; Conroy 2010; Dunworth 2013; Fenton-Smith et al. 2016; Fenton-Smith & Humphreys 2016; Harris & Ashton 2011; Nallaya & Kehrwald 2013; Leslie-McCarthy & Tutty 2011).

ALL in the digital context

Increasingly though, universities are turning to digital technologies to enhance, supplement or replicate their face-to-face provisions. Demand for more flexible learning options (Leslie-McCarthy & Tutty 2011), the popularity of off-campus study (James, Krause & Jennings 2010), tighter financial constraints (Mort & Drury 2012) and increased enrolments of students who speak English as an additional language (International Education Advisory Council 2013) are just some of the reasons that there has been massive growth in tertiary digital learning. The move away from 'more supported' approaches to 'self-help' and 'self-access' resources brings with it a host of teaching and learning complexities. The IEAA 2103 Outcomes Report acknowledged this digital disruption, stating:

> *The advent of new forms of information and communication technologies which decouple learning from time and place constraints, impact the way academic programs and courses are delivered to an increasingly large, geographically dispersed and diverse student body, and pose particular challenges to Australia's tertiary education institutions. (IEAA 2013, p. 8)*

In other words, digitally based educational technologies have not simply replaced or even become surrogates for more traditional classroom approaches; the relationship between the technologies and the learning process is much more complex. As Tuman (1992, p. 8) accurately predicted more than 20 years ago, "computers will reshape not just how we read and write and, by extension, how we teach these skills, but our understanding of basic terms such as reading, writing and text", and the speed with which these technologies are progressing is making this task even more

complicated (Whittaker 2013; Oliver & Trigwell 2005; Sharpe & Oliver 2007; Bliuc, Goodyear & Ellis 2007; MacDonald 2008).

The learning and teaching situation is even further complicated by the myriad of options available to developers, teachers and students. Anderson (2003, p. 8) writes, "the current stampede of educational institutions to mount and deliver 'Web courses' has given rise to a large variation of models and modes of delivery". Smith and Kurthen (2007) attempt to organise the chaos by outlining a broad classification system for the manner in which the different technology-enhanced approaches manifest within a teaching and learning context (Figure 2). Their taxonomy is determined by the degree of integration with traditional face-to-face modes of instruction. It moves from 'web-enhanced', with its minimal use of online materials, to programs that are 'fully online', in which face-to-face modes have been largely abandoned.

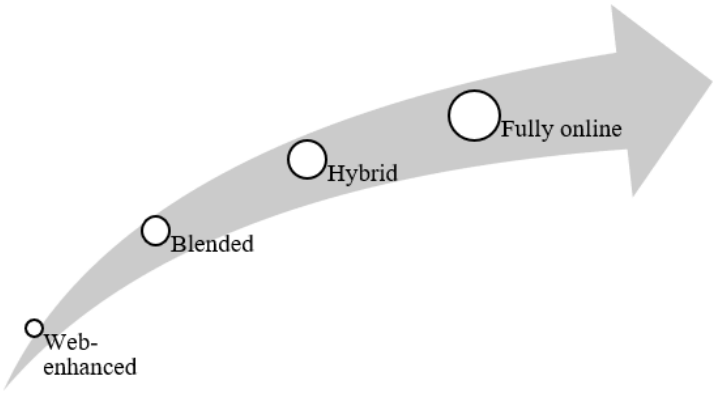

Figure 2. Smith & Kurthen's taxonomy of blended learning

In a practical guide for instructors, Dudeney and Hockly (2007) provide a more defined continuum by assigning percentages to each of the classifications, listing 'blended' courses as those where 75% of the content is online. The Cambridge English (2016) Digital Framework for Teachers, on the other hand, is more concerned with defining the nature of the relationship between the digital and face-to-face content rather than apportionment of time to each delivery mode. For example, it contrasts an "integrated blend," where the digital and face-to-face components "form a single coherent course," (Cambridge English 2016, "Integrated Blend") with a "parallel blend," in which the components are "independent of each other" (Cambridge English 2016, "Parallel Blend"). In addition, there are a range of delivery characteristics beyond the dichotomy of online/face-to-face that should also be considered, such as individual/collaborative (the degree to which social interaction occurs between students), self-directed/facilitated (the degree to which a course instructor takes an active role), and synchronous/asynchronous (whether interactions take place in 'real time', i.e. synchronously).

By focusing solely on the manner of content delivery, however, these models oversimplify the impact of technology-enhanced education on a wider variety of learning dimensions (Shea 2007; Britain 2011; Means, Toyama, Murphy & Baki 2013). These dimensions have been explored in the literature on digital learning along a number of different axes, for example heutagogic/pedagogic (Hase & Kenyon 2000; Blaschke 2012), synthetic/immersive (Krahnke 1987; Graham & Beardsley 1986; Yalden 1983; Means et al. 2013) and self-assessed/formally-assessed (Britain 2011; Means et al. 2013).

While self-assessed/formally assessed is relatively self-explanatory (although in practice may take a variety of different forms), the heutagogic/pedagogic and synthetic/immersive axes require clarification. Hase and Kenyon (2000, p. 1), who are credited with coining the term heutagogy, define it as "an educational approach where it is the learner himself who determines what and how learning should take place". In other words, heutagogic learning is "self-determined" and requires a greater degree of maturity, self-reflectivity and cognitive development (Canning & Callan 2010, p. 72), while pedagogic learning, by contrast, requires a lesser degree of those traits and therefore more instructor control over the program structure and learning outcomes.

The immersive/synthetic axis refers to the design of the syllabus. Immersive describes a syllabus where "the teaching of content or information in the language being learned with little or no direct or explicit effort to teach the language itself separately from the content being taught" (Krahnke 1987, p. 66), and synthetic, a term first utilised by Yalden (1983), describes a language teaching syllabus that isolates elements (such as morphology, syntax, lexis, etc.) for student analysis. Although the specific terms synthetic and immersive draw on work done in the area of English language teaching (Graham & Beardsley, 1986; Krahnke, 1987; Yalden, 1983), there are obvious parallels to the Continuum of Tertiary ALL Support developed by Jones et al. (2001) in that both move from the lesser to the greater contextualisation of language.

Shea (2007, p. 28) argues that the "impacts of these blending options should be considered in a conceptual framework for blended or hybrid teaching and learning". Figure 3 thus situates each of these dimensions along an axis, moving from independent to inter-dependent and each dichotomic set as related to either the curriculum or the delivery. Attributes are considered independent if less input and cooperation is demanded of students' instructors or peers, while inter-dependent attributes require a greater degree of collaboration between those actors.

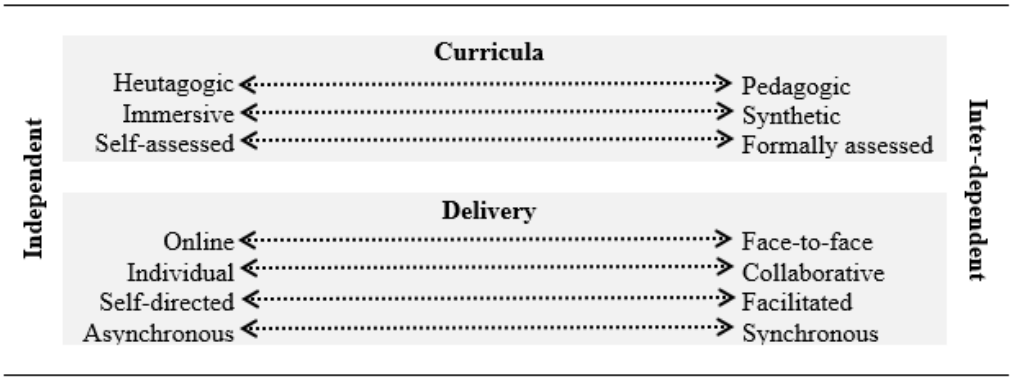

Figure 3. Dimensions of technology-enhanced learning

ALL in the Australian and the digital context

Griffith University's EnglishHELP <www.griffith.edu.au/englishhelp> (Figure 4) provides a characteristic example, advertising "individual consultations with an academic language specialist … workshops in speaking, listening and academic writing, as well as free self-help resources"(Humphreys et al. 2016). When plotted against the dimensions of technology-enhanced learning (Figure 5), the delivery of the program is highly independent with virtually no interaction between the facilitators and/or the students. On the other hand, the strongly pedagogic orientation

coupled with the generally synthetic syllabus indicates a mostly inter-dependent curricular approach.

Figure 4. HELP Yourself Resources landing page

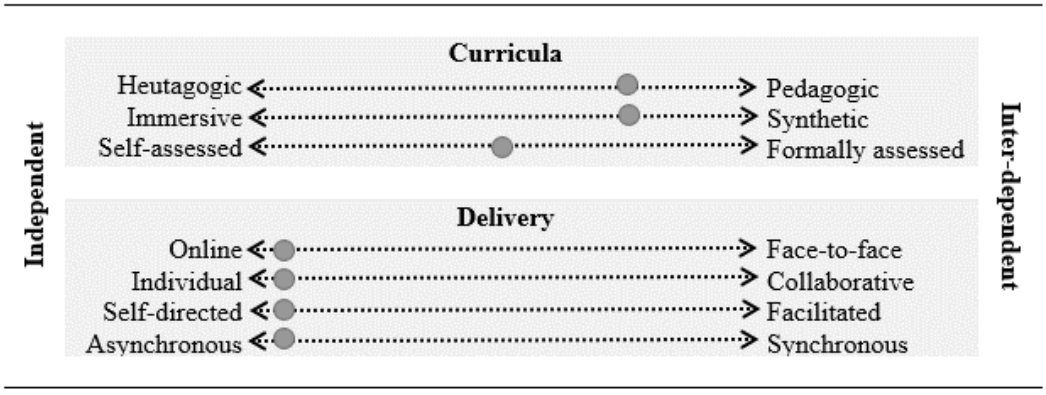

Figure 5. Help Yourself Resources: Dimensions of technology-enhanced learning

This site, like many academic language and learning websites, is developed by a specialised support unit at the university, but university libraries and individual departments/schools also often host their own resources. Indeed, it is not uncommon to find a mix of overlapping materials

provided by a number of different entities at a single university. The digitial ALL context has also been expanding beyond what might be coinsidered the more classical approach of a hub website. Two papers in this special issue for example explore providing students with digital feedback on writing tasks (Beccaria, Kek & Huijser 2019; Cavaleri, Kawaguchi, Di Biase & Power 2019), and increasingly one-to-one consultation and mentoring services—the tradional backbone of tertiary ALL support—are being outsourced to third parties conducted via the web and smartphone apps (Ashford-Rowe & Howarth 2011).

Wingate and Dreiss (2009) remain highly critical of many of these online services, describing them as little more than reference guides or judging them as overly focussed on generic study skills. Instead, they advocate strongly for online programs to be contextualised within an academic discipline and embedded in the course curriculum. They are also condemning of sites that take a "behaviourist approach to learning" with little scope for student interaction (Wingate & Dreiss 2009, p. 14). While academic language and learning sites are perhaps best considered and evaluated as part of a broader context within a university's student support structure, Wingate and Dreiss are on sound pedagogical footing with regards to learner interaction online, which is generally considered a key ingredient for learning (Anderson 2003; Fox & Mackeogh 2003; Sims 2003; Vygotsky 1978; Wingate & Dreiss 2009). Goodfellow et al. (2009, p. 1029) observe however that much of web-based ALL materials "are descriptive of approaches to academic writing, rather than materials to assist in its development", an observation that seems to hold generally true for programs across Australia even today. Despite the technological advances of available software, even a cursory audit reveals only a limited number of online ALL that offer any form of interactivity, and even those mostly provide relatively minimal interaction, relying more on instructive material followed by multiple-choice questions.

There are however bright points in the Australian digital landscape that deserve to be highlighted. ASCENT at Monash University is an online academic writing program developed in 2016 <https://arts.monash.edu/apw/academic-english-online/>. The program was built in Moodle and comprises a set of ten self-paced academic grammar modules. Each module includes instruction, authentic examples, instant feedback, and discussion forums. Another program of note is English for Uni at the University of Adelaide <www.adelaide.edu.au/english-for-uni/>. This program examines "difficult grammar and academic writing concepts" (University of South Australia 2016, para. 1) through a variety of dramatised skits that have been recorded and then hosted on the site. These are complemented by in-depth instruction, interactive exercises and curated links to external websites. At Griffith University, EnglishHELP has developed a suite of online HELP Yourself Resources for academic language development specifically pitched at EAL students <www.griffith.edu.au/englishhelp>. These resources comprise short, animated videos with corresponding interactive activities on 20 identified topics, designed to support students' academic language needs and to complement face-to-face consultations and in-degree course offerings like the English Language Enhancement Courses by closing the feedback loop (see Fenton-Smith et al. 2016. .

In the literature, there are also four studies of note that can provide a roadmap for both researchers and educational designers: (1) the Online Student Resource Centre at Monash University (Clerehan et al. 2003), (2) the WRiSE program at the University of Sydney (Mort & Drury 2012), (3) the L3 Website at the University of South Australia (Nallaya & Kehrwald 2013), and (4) the Pathways Enabling Course at the University of New England (Wijeyewardene, Patterson & Collins 2013).

The study from Clerehan et al. (2003) is possibly the earliest explication of an online academic language support program in Australia. They describe a development by the Monash University Language and Learning Services Unit of the Online Student Resource Centre. The project's aims were to convert the Unit's bank of print resources—a collection of general and discipline-specific, self-guided tutorials that largely targeted EAL students—into a digital and downloadable format. These resources were then organised within a skeuomorphic website designed to emulate the architecture of the then-popular 'language learning laboratory'. Highlighting the need to avoid "disembodied 'skills' programs" (Clerehan et al. 2003, p. 24), the Monash team incorporated a series of discipline-specific writing tutorials with accompanying discussion forums. However, the developers also built in mechanisms to bypass these interactive elements for students who preferred "a purely information-seeking approach" (Clerehan et al. 2003, p. 27).

Recognising the need to account for the differing media of the internet, the Monash developers employed the use of a professional web designer to assist with the digitisation process. They were particularly concerned with how to transfigure text-heavy documents for a web-based platform while still maintaining "in a coherent way the multiple elements involved in the instruction" (Clerehan et al. 2003, p. 21). In order to do so, they delineated four key aspects of face-to-face teaching they wished to preserve in the Online Student Resource Centre:

1. *The opportunity for students to practise;*
2. *Provision of samples of student work with textual commentary;*
3. *Encouragement of learner reflection, as far as possible, by conceiving of the activities as a dialogue between student and teacher; and*
4. *Provision of opportunities to ask questions.* (Clerehan et al. 2003, p. 22)

For its time, the Online Student Resource Centre at Monash was truly cutting edge, both in its developmental process and its theoretical underpinnings. It incorporated theoretically and empirically based approaches of both English language teaching and academic language and learning. It employed professional advice on web development and design, and considered affordances for the limitations of the web technologies in the early 2000s. The developers did note the difficulty that they had encountered in regularly maintaining some of the interactive elements of the site, such as the discussion forums, which they suggest contributed to their inability to fully realise their original goals for the program.

Mort and Drury's (2012) study provides perhaps the best contemporary Australian model for both the development and evaluation. Their paper describes the creation, implementation and evaluation of the Writing Reports in Science and Engineering (WRiSE) program, which is an online ALL support tool for science and engineering students at the University of Sydney. WRiSE comprises nine modules that are specifically tailored for particular disciplines, such as molecular biology and civil engineering. They (2012, p. 2) describe the program as a "unique resource providing an integrated, open source, student-centred, online learning and teaching environment". The development of the program was a collaboration between the content providers (i.e. science and engineering academic instructors) and ALL specialists. These designers drew from their expertise in e-learning, systemic functional linguistics and genre analysis, as well as pedagogical theories in constructivist learning. In particular, the developers drew greatly on ideas from the academic literacies model. The developers also drew from theories in multimedia learning and digital literacy in designing the program.

A study from Nallaya and Kehrwald (2013) was an evaluation of the University of South Australia (UniSA) Language Literacies Learning (L3) website, developed in 2012 to provide UniSA students with ALL support. The L3 website was designed to cater to UniSA's four major academic groups by providing discipline-tailored models and examples of "specific genre-based writing and … language" (Nallaya & Kehrwald 2013, p. 80). Nallaya and Kehrwald (2013) explicitly state that the L3 website is underpinned by the academic literacies model (Lea & Street 1998) as well as sociocultural learning theories initially advanced by Vygotsky (1978). The results of an online survey administered by Nallaya and Kehrwald indicated that students found the website engaging and useful to their studies.

In the final study, Wijeyewardene, Patterson and Collins (2013) examine an online academic literacy workshop developed by the ALL staff at the University of New England (UNE). The workshop supports a foundation program at UNE called the Pathways Enabling Course and guides students through the writing process, from task analysis to final drafting. Focussing on elements of discourse (such as paragraph structure) and academic conventions (such as evaluating and referencing sources), the workshop has utilised the Moodle learning management system (LMS) to build reference guides, self-directed tasks, and quizzes. In addition, students have access to a peer-to-peer discussion board and the ability to upload pieces of their own writing for which they receive feedback from an ALL tutor. Although the workshop has not been empirically evaluated, student feedback has been positive.

Technology-enhanced academic language support (TALS)

These programs certainly represent a distinct breed of academic language and learning enhancement with its own specific objectives, expected learning outcomes and educational design needs. This distinction is demonstrative throughout the literature (Conroy 2010; Drury & Jones 2010; Dunworth 2013; Leslie-McCarthy & Tutty 2011; Mort & Drury 2012; Nallaya & Kehrwald 2013; Strauss, Goodfellow & Puxley 2009). Dunworth (2013, p. 62) for example, distinguishes "self-access programs or independent learning resources" as "optional and additional" to disciplinary coursework, while both Leslie-McCarthy and Tutty (2011) and Goodfellow, Strauss and Puxley (2012) explicitly differentiate these programs from those that are "contextualised within academic courses" (Leslie-McCarthy & Tutty 2011, p. 25).

In other words, there is a recognised difference in here between *learning & teaching* and *support*, and regardless the debate of their efficacy as learning tools, this type of online academic language support has and will continue to proliferate. It is therefore imperative the designers and developers of these programs are aware of best practice in the field. However, the digital educational frontier is expanding at a blistering pace, and designers are struggling to keep up. In one of the few surveys conducted within this area, Leslie-McCarthy and Tutty (2011) found that program designers identified technical knowhow, web design and instructional design as some of the top challenges in developing online materials for ALL. In a more recent survey of the sector, Podorova et al. (2019) found that ALL practitioners are still bedevilled by the same concerns and questions nearly 10 years later.

Perhaps one of the reasons for this is that the number of published studies on online academic language support seems surprisingly scarce (Berry 2012; Conroy 2010; Leslie-McCarthy & Tutty 2011; Mort & Drury 2012; Nallaya & Kehrwald 2013; Goodfellow et al. 2012; Shea 2007; Kirkwood 2012; Mayes & de Freitas 2007; Pryjmachuk et al. 2012; Wijeyewardene et al. 2013). But really, this just pushes the question back one step: where is the literature? For such a

widespread practice, one suspects that numerous studies are in fact being conducted, but are being published here, there and everywhere, making them difficult to track down. The rabbit-hole of ed-tech terminology utilised throughout the literature does not help. *Online, blended, digital, web-based, technology-enhanced, computer-assisted, mobile-assisted, flipped* and *e-*, are variably hitched, seemingly at random, to such constructs as *learning, teaching, support, classroom, pedagogy and education*. This lack of terminological consensus makes even a basic literature review a frustrating process. Where does one start? For example, Dunworth (2013, p. 62) opts for a lengthy description of "online and e-learning language development opportunities that are self-access programs or independent learning resources"; Leslie-McCarthy and Tutty (2011) employ the much more succinct, but overly general (and semantically confusing) ALL websites; and Goodfellow et al. (2012, p. 1) write specifically about "web-based writing support".

Levy and Hubbard (2005, p. 148) have argued, not "having a generally accepted term available" for easy reference is "distracting and confusing". Cognate disciplines with established monikers, such as CALL (computer assisted language learning), MALL (mobile assisted language learning), and even ALL (academic language and learning), are well designated spheres of learning and teaching around which a robust body of literature has been steadily built. Yet in the digital academic language and learning space, a comprehensive, umbrella term has yet to appear.

Perhaps the time has come to nominate a label that will encompass any adjunctive teaching and learning program that utilises some form of digitally based technology to support, enhance or develop academic language and skills. Neither *CALL* nor *ALL Websites* seem entirely appropriate, with *CALL* being too closely aligned to second language learning, and *ALL Websites* being so broad as to possibly include an information page about an ALL centre's service options. *Web-based writing programs*, on the other hand, is not inclusive enough. Therefore, this editorial advocates the term *technology-enhanced academic language support* (TALS). As a label, TALS is intuitive, parsimonious, descriptive and inclusive of many different practices. It is specific enough to delimit the teaching and learning space appropriately, but generic enough to account for potential technological advances in the coming years. Most importantly, a term like TALS could provide a single rallying point around which researchers, developers and practitioners can coalesce their findings, examples of best practice and experiences.

Conclusion

Since the earliest adoption of educational technologies, teachers and researchers have been exploring its efficacy on language learning and development. The speed with which these technologies are now infiltrating academic student support will continue to increase, and so the need for good guidance in this space will likewise increase. Currently in academic language and learning support, however, the digital space while prevalent and expanding is both poorly defined and the literature widely dispersed. It has thus been argued here that a single term of reference, such as TALS, could provide a centralised meeting point where research and experiences from the field can be more readily and conveniently shared.

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